FINDER FLY

A PROJECT REPORT
for
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CERTIFICATE

Certified that **Mahima Goyal 202410116100112, Harsh Aggarwal 202410116100081and Kartikey Dwivedi 202410116100098** has/ have carried out the project work having "FinderFly" (**Mini Project-I, K24MCA18P**) for **Master of Computer Application** from Dr. A.P.J. Abdul Kalam Technical University (AKTU) (formerly UPTU), Lucknow under my supervision. The project report embodies original work, and studies are carried out by the student himself/herself and the contents of the project report do not form the basis for the award of any other degree to the candidate or to anybody else from this or any other University/Institution.

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“FinderFly”

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ABSTRACT

Losing or finding personal belongings can be a distressing and time-consuming experience. To address this issue, our project, Lost and Found Web Application, provides a streamlined digital platform to bridge the gap between individuals who have lost items and those who have found them. Developed using JavaScript as the core programming language, the application leverages modern web technologies to ensure a seamless and user-friendly experience.

The platform enables users to register, report lost or found items, and receive notifications when potential matches are identified. Key features include a robust item-matching algorithm, a real-time notification system, and intuitive user interfaces. The backend is powered by Node.js, ensuring fast and scalable server-side performance, while the frontend utilizes frameworks like React.js to deliver an engaging and responsive design. Data is stored securely in a NoSQL database, providing flexibility for managing dynamic user-generated content.

By replacing traditional notice boards and scattered social media posts with an organized and efficient system, the application significantly reduces the time and effort required to recover lost items. This project demonstrates how JavaScript can be harnessed to develop impactful solutions for real-world problems.

Keywords: Lost and Found, FinderFly, lost and found using js, frontend framework(react.js)

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Mahima Goyal

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Introduction:

1.1 Overview:

The Lost and Found Web Application is an innovative platform designed to address a common problem: losing or finding personal belongings. The application streamlines the process of reporting lost and found items, connecting individuals efficiently using JavaScript as the core technology. This section elaborates on the platform's overview in five distinct topics.

1.1.1 Problem Identification:

Losing valuable items or finding others' belongings without a reliable way to return them can be frustrating. Traditional methods such as notice boards or social media posts are inefficient, often leaving items unclaimed. There is a clear need for a centralized system that simplifies this process and enhances the likelihood of recovering lost items.

1.1.2. Purpose of the Application:

The purpose of this application is to provide a digital solution that connects people who have lost items with those who have found them. By leveraging advanced technology, the platform ensures a faster, more effective way of reporting, searching, and matching lost and found items. The ultimate aim is to save time and reduce stress for users.

1.1.3. Key Features:

The application includes essential features to facilitate its purpose effectively:

- **User Registration and Authentication**: Ensures secure access and personalized experiences.
- **Item Reporting**: Enables users to post detailed information about lost or found items, including descriptions, images, and locations.
- **Matching Algorithm**: Employs intelligent filtering and keyword-based searches to match reported lost items with found items.
- **Notifications**: Provides real-time updates to users when a potential match is identified.

- **Communication Tools**: Facilitates secure interactions between users to arrange the return of items.

1.1.4. Core Technology Stack:

The application is built using JavaScript as the primary programming language, which ensures seamless integration between the frontend and backend. Supporting technologies include:

- **React.js**: For developing a dynamic and responsive user interface.
- **Node.js**: Handles server-side operations and ensures scalability.
- **MongoDB**: Manages and stores user and item data efficiently.
- **Nginx/Apache**: Provides a robust web server for hosting the platform.

1.1.5. Benefits to Users:

The Lost and Found Web Application offers numerous benefits to users:

- **Efficiency**: Reduces the time and effort required to recover lost belongings.
- **Reliability**: Offers a trusted platform with accurate matching algorithms.
- **Accessibility**: Ensures ease of use across all devices, including desktops, tablets, and mobile phones.
- **Community Building**: Fosters a sense of mutual assistance by enabling individuals to help others recover their belongings.

Feasibility Study:

A feasibility study was conducted to evaluate the practicality and benefits of implementing this project. The study covered the following six dimensions:

2.1 Technical Feasibility:

The project is technically feasible due to the availability of reliable web technologies. JavaScript, along with frameworks like Node.js and React.js, provides a robust foundation for developing an efficient web application. MongoDB serves as a scalable database solution for handling dynamic data.

2.2 Economic Feasibility:

The project incurs minimal costs as it relies on open-source technologies such as Node.js and MongoDB. Hosting the application on affordable cloud platforms ensures that the project remains cost-effective without compromising performance.

2.3 Operational Feasibility:

The platform is user-friendly and can be adopted quickly by users of all technical skill levels. Features like intuitive navigation, easy item reporting, and real-time notifications enhance the operational feasibility of the application.

2.4 Schedule Feasibility:

The project has a well-defined timeline. Development tasks, including design, coding, and testing, can be completed within a six-month period with a small development team.

2.5 Social Feasibility

The application fosters a sense of community by encouraging individuals to assist others in finding their belongings. This positive social impact enhances its acceptance among users.

2.6 Legal Feasibility

The application adheres to data privacy regulations, such as GDPR and relevant national data protection laws, ensuring legal compliance. Users are required to agree to terms of use and privacy policies.

Project Objectives:

3.1 Create a Centralized Platform: Develop a single web-based system where users can report and search for lost or found items with ease. The platform aims to centralize all related activities into one convenient location, simplifying the user experience.

3.2 Enable Advanced Item Matching: Implement a robust algorithm capable of identifying potential matches based on detailed parameters such as keywords, categories, geographical proximity, and timestamps. This feature ensures high accuracy and relevance in matching results.

3.3 Promote Secure Communication: Provide a secure and encrypted communication system between users to facilitate the exchange of information without compromising their privacy or data security.

3.4 Enhance User Accessibility Across Devices: Ensure that the platform operates smoothly on a range of devices, including desktops, tablets, and mobile phones. This multi-platform compatibility broadens the application's usability.

3.5 Deliver Real-Time Notifications: Integrate a notification system that promptly informs users about matches or updates, enabling quick responses and fostering trust in the system.

3.6 Support Continuous Improvement: Design the platform with flexibility for updates and enhancements, ensuring that it can evolve with user needs and technological advancements.

Hardware and Software Requirements:

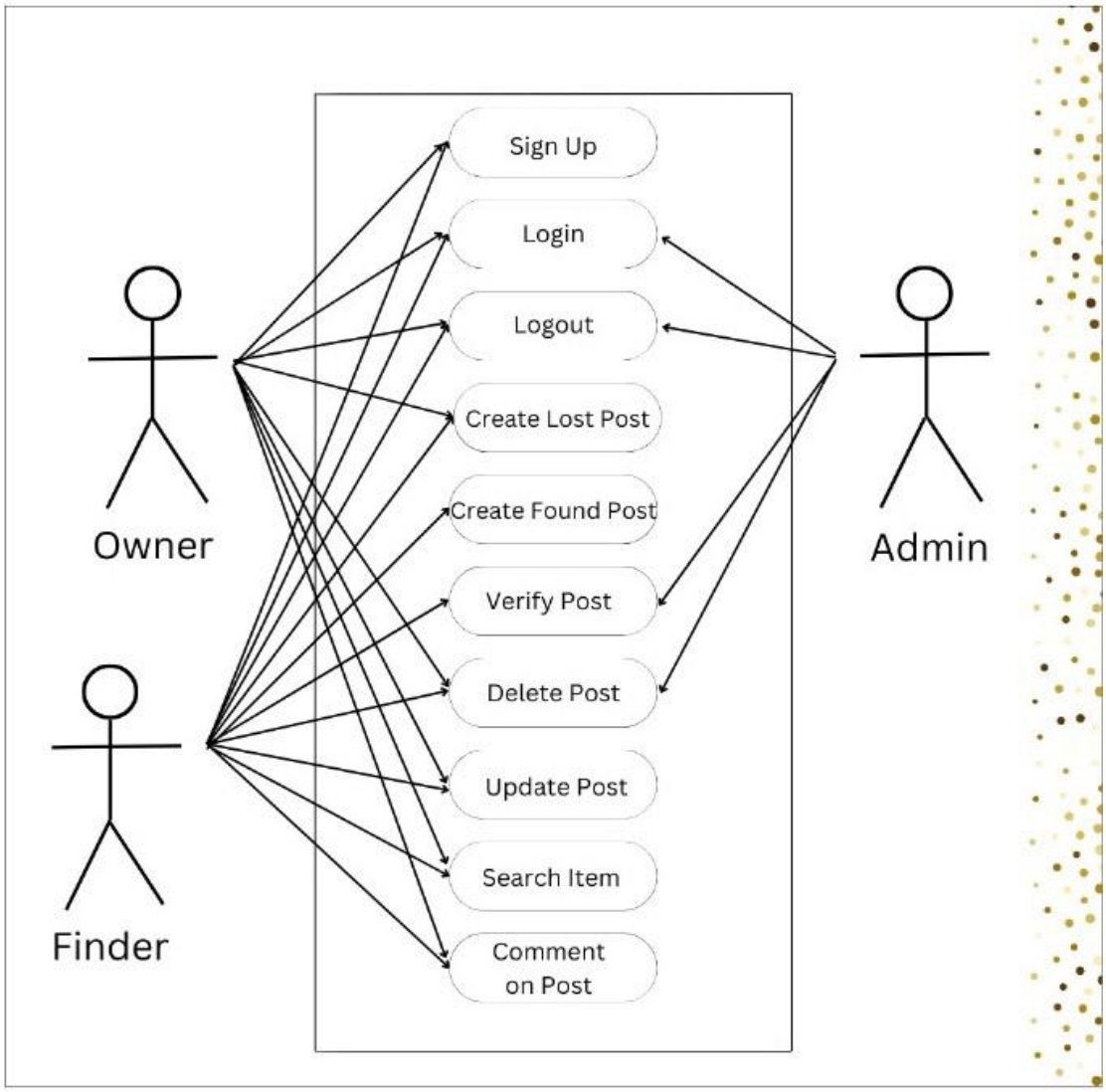
4.1 Hardware Requirements:

- **Server**: Minimum 8-core processor, 16 GB RAM, 500 GB SSD.
- **Client Devices**: Standard desktops, laptops, tablets, and smartphones with internet access.

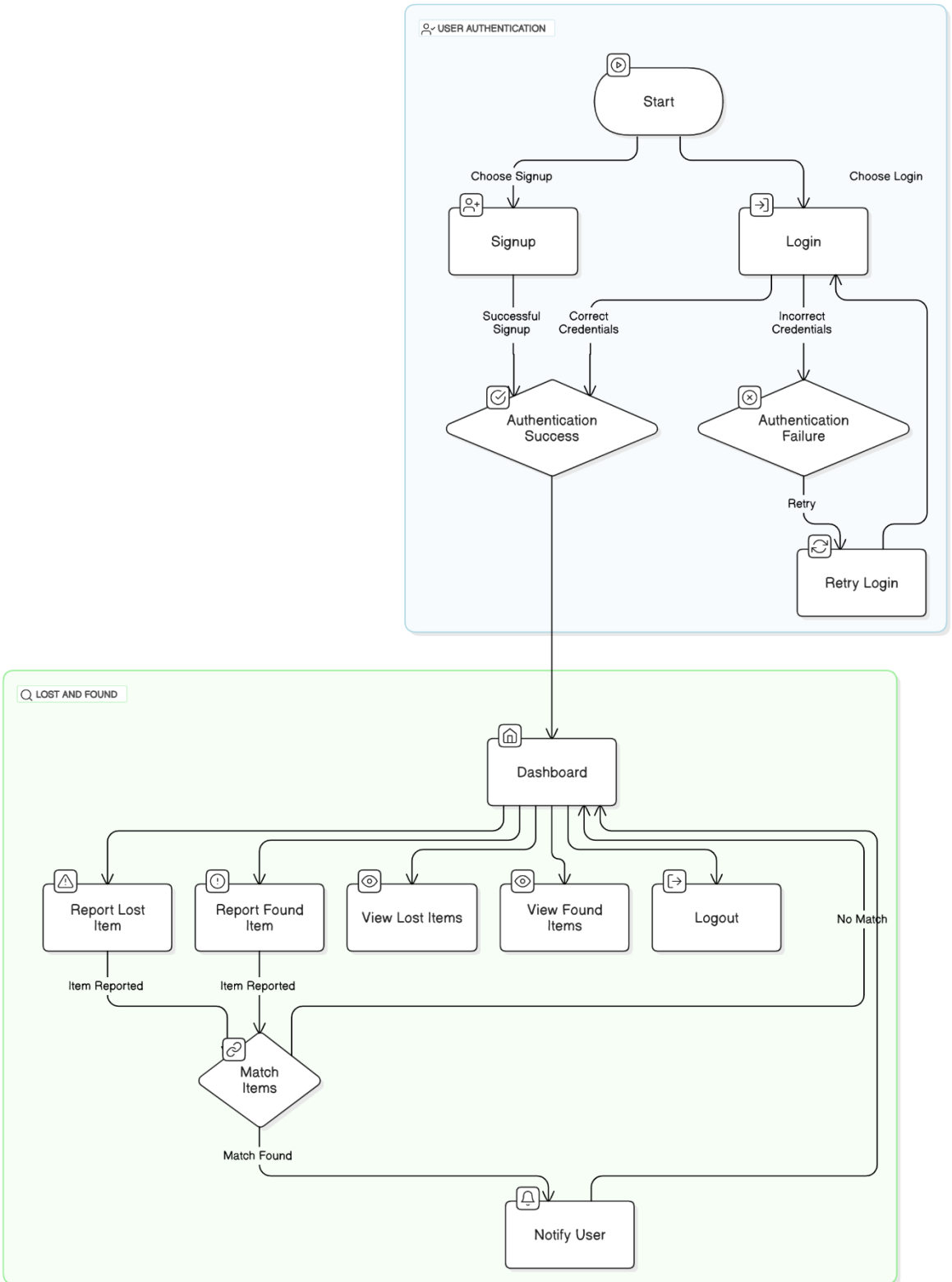
4.2 Software Requirements

- **Frontend Framework**: React.js for building the user interface.
- **Backend Framework**: Node.js for handling server-side logic.
- **Database**: MongoDB for storing user and item data.
- **Web Server**: Nginx or Apache for hosting the application.
- **Development Tools**: Visual Studio Code, Postman, Git.
- **Hosting Platform**: AWS or DigitalOcean for deploying the application.

ER Diagram


Sign Up
Login
Logout
Create Lost Post
Create Found Post
Verify Post
Delete Post
Update Post
Search Item
Comment on Post
Owner
Finder
Admin

Lost and Found Website Flowchart



USP

(Unique selling proposition)

1. Verified Listings and Users

A secure platform that ensures all users and listings are verified, reducing spam or false reports.

2. Multi-Category Support

Covers a wide range of categories, including personal items, pets, documents, and even people, making it a one-stop solution.

3. Fast-Track ID Recovery

Exclusive services for reporting and recovering critical IDs like passports, Aadhar cards, or driver's licenses in partnership with relevant authorities.

Project Flow:

The project flow includes the following stages:

6.1 User Registration and Login

Users create accounts by providing basic details. They can log in to access personalized features, such as reporting lost or found items and receiving notifications.

6.2 Reporting Items

Users can report lost or found items by filling out a detailed form. The form includes fields for the item description, location, date, and an optional photo.

6.3 Matching Process

An algorithm compares reported lost items with found items, considering keywords, location proximity, and item categories. Matches are displayed to users for review.

6.4 Notifications

When a potential match is identified, users receive notifications via email or on the platform.

6.5 Communication

Matched users can communicate securely through the platform to arrange the return of items.

6.6 Closing the Loop

Once an item is returned, users can mark the item as resolved, removing it from the active database.

Project Outcome:

The Lost and Found Web Application aims to achieve the following detailed outcomes:

1. **Streamlined User Experience**: Provide a cohesive and user-friendly platform that simplifies the process of reporting and recovering lost items. The intuitive interface reduces learning curves and increases user satisfaction.

2. **Accurate Matching Results**: Leverage an advanced matching algorithm that incorporates multiple criteria such as descriptions, locations, and categories, ensuring that users receive precise and relevant results.

3. **Improved Community Engagement**: Foster a sense of cooperation and mutual assistance by enabling users to assist each other in recovering their belongings. This community-driven approach adds social value to the platform.

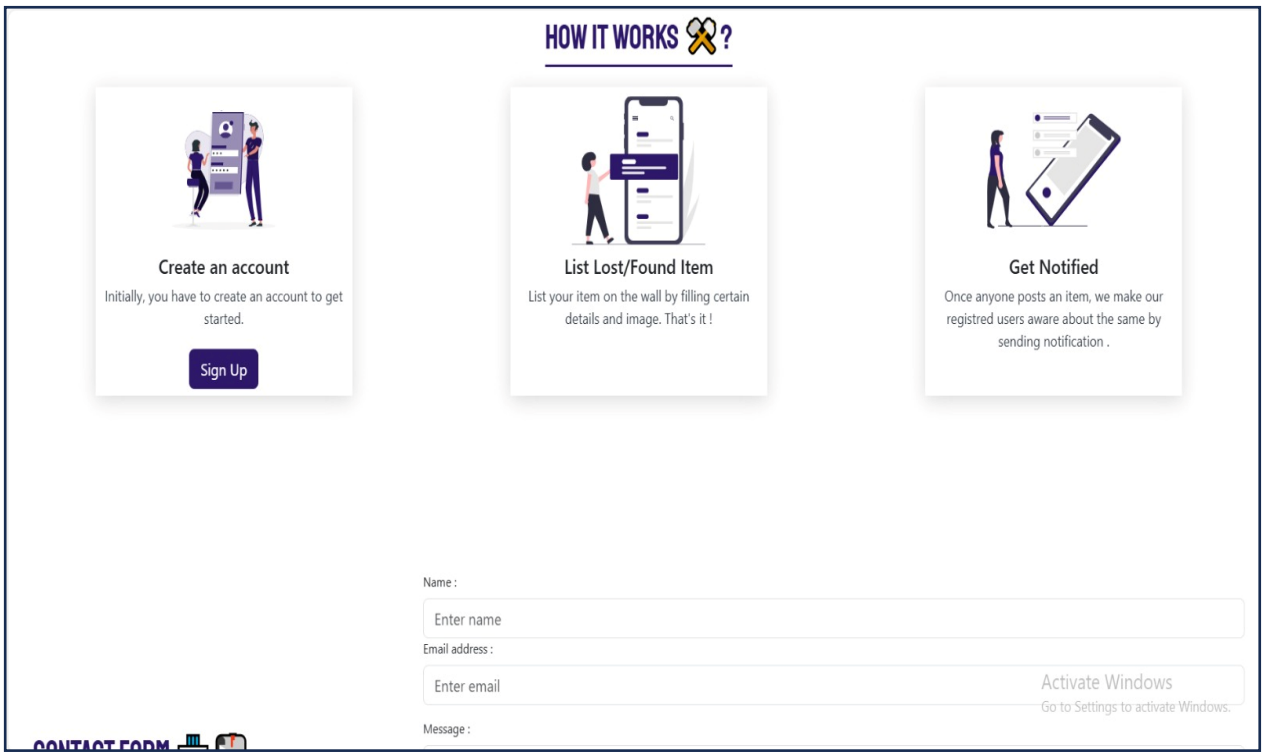
4. **High Scalability**: Design the platform to accommodate an increasing number of users and data entries without compromising speed or reliability. This ensures long-term usability and relevance.
5. **Efficient Real-Time Operations**: Utilize real-time notifications and updates to keep users informed promptly. This ensures timely action and enhances trust in the system.

6. **Reduced Stress and Inconvenience**: Mitigate the frustration associated with lost items by offering a reliable and effective solution. Users gain peace of mind knowing they have a dependable tool to recover their belongings.

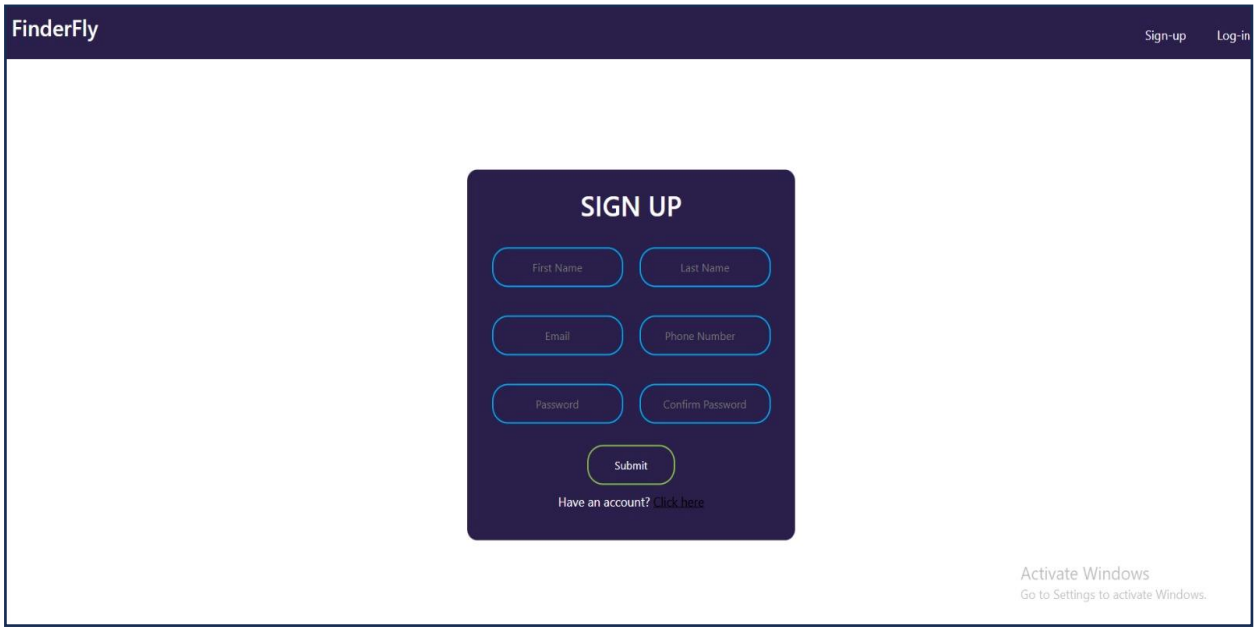
7. **Flexible and Evolving System**: Build the platform with scalability and adaptability in mind, allowing for continuous updates and improvements based on user feedback and technological advancements.

PROTOTYPE

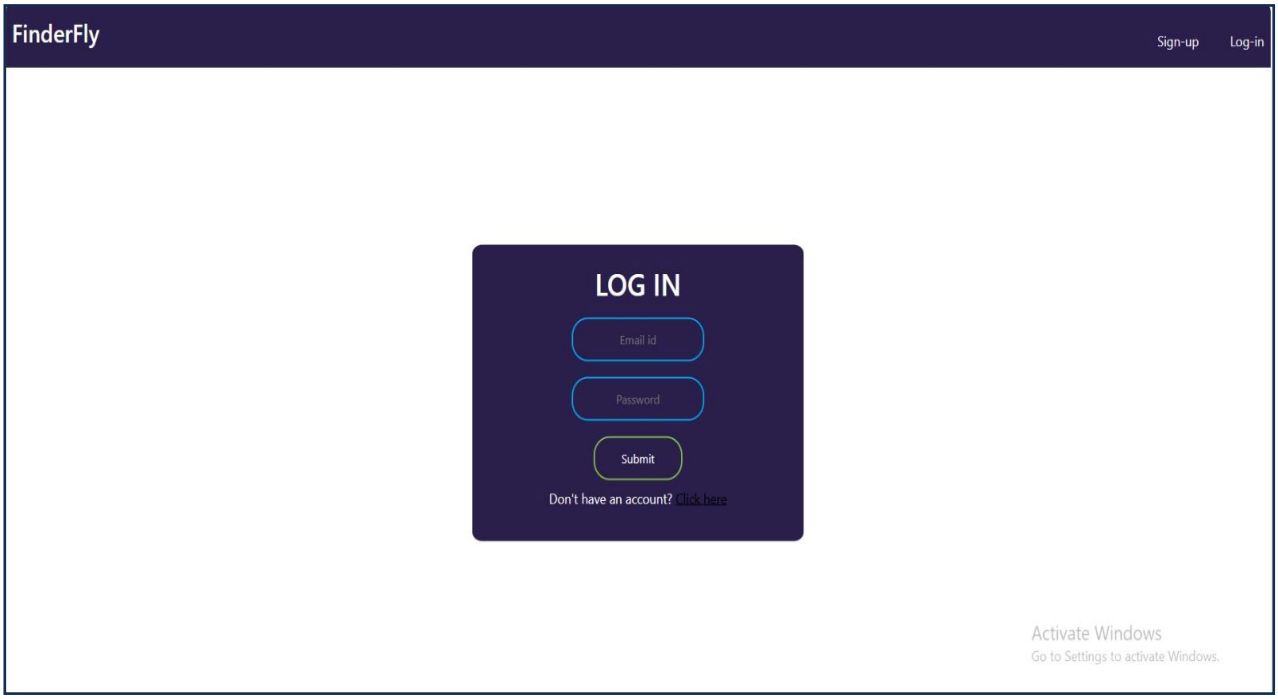
(fig no. 1)



LANDING PAGE (fig no. 2)



SignUp Page (fig no. 3)



LogIn Page (fig no. 4)

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